

Application No. 10/763,758
Response dated July 26, 2006
Response to Final Office action dated June 1, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

1. (Previously Presented) A light guiding plate comprising:
a light incident portion into which light is incident from a light source;
a light reflecting pattern to reflect the light provided from the light incident portion; and
a light transmitting surface to transmit the light reflected by the light reflecting pattern to a display panel,
wherein the light reflecting pattern includes a plurality of light reflecting sections each of which has:
a first light reflecting plane that is inclined with respect to the light transmitting surface to face toward the light source; and
a second light reflecting plane that is inclined with respect to the light transmitting surface and connected with an edge of the first light reflecting plane so that the light reflection sections each form a prism shape, the light reflecting sections respectively having the second light reflecting planes that are configured to have different areal sizes to control reflectivity of the respective light reflecting sections,
wherein the areal sizes of the second light reflecting planes are gradually increased by a selected amount such that the areal size of a second light reflecting plane is larger as the second light reflecting plane is remoter from the light incident portion, and
wherein the first light reflecting planes of the light reflecting sections respectively have first angles with respect to the light transmitting surface, and the second light reflecting planes of the light reflecting sections respectively have second angles with respect to the light transmitting surface, the first angles having a substantially identical value and the second angles being gradually decreased by a selected amount such that the second angle of a second light reflecting plane is smaller as the second light reflecting plane is remoter from the light incident portion.

2. - 3. (Cancelled)

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4. (Previously Presented) The light guiding plate of claim 1, wherein the light reflecting sections each have a substantially identical height.

5. - 7. (Cancelled)

8. (Currently Amended) A light guiding plate comprising:
a light incident portion into which light is incident from a light source;
a light reflecting surface ~~on which~~ comprising a light reflecting pattern ~~is formed~~ to reflect the light provided from the light incident portion; and

a light transmitting surface to transmit the light reflected by the light reflecting pattern to a display panel,

wherein the light reflecting pattern includes a plurality of light reflecting ~~protrusions~~ sections protruding from the light reflecting surface, each of the light reflecting ~~sections~~ protrusions comprising:

a first light reflecting plane that is inclined with respect to the light transmitting surface to face toward the light source; and

a second light reflecting plane that is inclined with respect to the light transmitting surface and connected with an edge of the first light reflecting plane so that the light reflecting ~~sections~~ protrusions each form a prism shape, the light reflecting ~~sections~~ protrusions respectively having the second light reflecting planes that are configured to have different areal sizes to control reflectivity of the respective light reflecting ~~sections~~ protrusions,

wherein areal sizes of the light reflecting ~~sections~~ protrusions are gradually increased by a selected amount such that the areal sizes of the first light reflecting plane and the areal size of the second light reflecting plane are larger as the light reflecting ~~section~~ protrusion is remoter from the light incident portion, and

wherein the first light reflecting planes of the light reflecting protrusions respectively have first angles with respect to the light transmitting surface, the second light reflecting planes of the light reflecting protrusions respectively have second angles with respect to the light transmitting surface, and the light reflecting protrusions each have different heights, wherein the first angles have a

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substantially identical value, the second angles have a substantially identical value, and the heights are gradually increased by a selected amount such that the height of a light reflecting protrusion is larger as the light reflecting protrusion is remoter from the light incident portion.

9. (Cancelled)

10. (Previously Presented) A liquid crystal display device comprising:
a lamp assembly to generate light in a linear direction;
a display panel assembly to display images using image data externally provided and light provided in a planar direction; and
a light guiding plate comprising:
a light incident portion into which the light is incident from the lamp assembly;
a light reflecting pattern to reflect the light provided from the light incident portion; and
a light transmitting surface to transmit the light reflected by the light reflecting pattern to the display panel assembly,
wherein the light reflecting pattern includes a plurality of light reflecting sections each of which has:
a first light reflecting plane that is inclined with respect to the light transmitting surface to face toward the light source; and
a second light reflecting plane that is inclined with respect to the light transmitting surface and connected with an edge of the first light reflecting plane so that the light reflection sections each form a prism shape, the light reflecting sections respectively having the second light reflecting planes that are configured to have different areal sizes to control reflectivity of the respective light reflecting sections,
wherein the areal sizes of the second light reflecting planes are gradually increased by a selected amount such that the areal size of a second light reflecting plane is larger as the second light reflecting plane is remoter from the light incident portion, and
wherein the first light reflecting planes of the light reflecting sections respectively have first angles with respect to the light transmitting surface, and the second light reflecting planes of the

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light reflecting sections respectively have second angles with respect to the light transmitting surface, the first angles having a substantially identical value and the second angles being gradually decreased by a selected amount such that the second angle of a second light reflecting plane is smaller as the second light reflecting plane is remoter from the light incident portion.

11. - 12. (Cancelled)

13. (Previously Presented) The liquid crystal display device of claim 10, wherein the light reflecting sections each have a substantially identical height.

14. (Previously Presented) A liquid crystal display device comprising:
a lamp assembly to generate light in a linear direction;
a display panel assembly to display images using image data externally provided and light provided in a planar direction; and
a light guiding plate comprising:
a light incident portion into which the light is incident from the lamp assembly;
a light reflecting surface ~~on which~~ comprising a light reflecting pattern ~~is formed to reflect~~ the light provided from the light incident portion; and
a light transmitting surface to transmit the light reflected by the light reflecting pattern to the display panel assembly,
wherein the light reflecting pattern includes a plurality of light reflecting sections ~~protrusions~~ ~~extending from the light reflecting surface~~, each of the light reflecting sections ~~protrusions~~ comprising:
a first light reflecting plane that is inclined with respect to the light transmitting surface to face toward the light source; and
a second light reflecting plane that is inclined with respect to the light transmitting surface and connected with an edge of the first light reflecting plane so that the light reflecting sections ~~protrusions~~ each form a prism shape, the light reflecting sections ~~protrusions~~ respectively having the second light reflecting planes that are configured to have different areal sizes to control reflectivity of the respective light reflecting

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~~sections~~protrusions,

wherein areal sizes of the light reflecting ~~sections~~protrusions are gradually increased by a selected amount such that the areal sizes of the first light reflecting plane and the areal size of the second light reflecting plane are larger as the light reflecting ~~section~~protrusion is remoter from the light incident portion, and

wherein the first light reflecting planes of the light reflecting protrusions respectively have first angles with respect to the light transmitting surface, the second light reflecting planes of the light reflecting protrusions respectively have second angles with respect to the light transmitting surface, and the light reflecting protrusions each have different heights, wherein the first angles have a substantially identical value, the second angles have a substantially identical value, and the heights are gradually increased by a selected amount such that the height of a light reflecting protrusion is larger as the light reflecting protrusion is remoter from the light incident portion.

15. (Cancelled)

16. (Withdrawn) A method for displaying images in a liquid crystal display device, comprising:

generating light in a linear direction;

transforming the light in a linear direction into light in a planar direction, the transforming step including:

providing light reflecting sections each having a different reflectivity; and

reflecting the light in a linear direction at the light reflecting sections to obtain the light in a planar direction, a light reflecting section having higher reflectivity as the light reflecting section is remoter from a light source generating the light in a linear direction; and

displaying images using the light in a planar direction and image data externally provided.

17. (Withdrawn) The method of claim 16, wherein the reflecting step includes varying the reflectivity of the respective light reflecting sections by changing areal sizes of the light reflecting sections such that the area size of a light reflection section is larger as the light reflection section is remoter from the light source.

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18. (Withdrawn) The method of claim 17, wherein the light reflecting sections each have a prism shape with first and second light reflecting planes and a bottom plane, the varying the reflectivity of the respective light reflecting sections including:

maintaining a first angle between the first light reflecting plane and the bottom plane substantially constant in all the light reflecting sections; and

decreasing a second angle between the second light reflecting plane and the bottom plane such that the second angle of a light reflecting section is smaller as the light reflecting section is remoter from the light source.

19. (Withdrawn) The method of claim 17, wherein the light reflecting sections each have a prism shape with first and second light reflecting planes and a bottom plane, the varying the reflectivity of the respective light reflecting sections including:

increasing a first angle between the first light reflecting plane and the bottom plane such that the first angle of a light reflecting section is larger as the light reflecting section is remoter from the light source; and

maintaining a second angle between the second light reflecting plane and the bottom plane substantially constant in all the light reflecting sections.

20. (Withdrawn) The method of claim 17, wherein the light reflecting sections each have a prism shape with first and second light reflecting planes and a bottom plane, the varying the reflectivity of the respective light reflecting sections including:

maintaining angles between the first and second light reflecting planes and the bottom plane substantially constant in all the light reflecting sections; and

increasing a height of the respective light reflecting sections such that the height of a light reflecting section is larger as the light reflecting section is remoter from the light source.